

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant(s) Offerle et al.

Serial Number: 10/708,671 Group Art Unit: 3663

Filing Date: March 18, 2004 Examiner: Tuan C. To

Title: Method and Apparatus for Controlling Brake-Steer in an  
Automotive Vehicle in Reverse

Attorney Docket Number: 81095823

**CERTIFICATE OF MAILING/TRANSMISSION**

I hereby certify that this correspondence is, on the date shown below, being electronically filed with the United States Patent & Trademark Office via EFS-Web and a registered e-Filer certificate.

\_\_\_\_\_2/2/10\_\_\_\_\_ /Lisa E. Brown/\_\_\_\_\_

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**AMENDED BRIEF ON APPEAL**

This brief is submitted in response to the Notice of Defective Appeal Brief mailed January 21, 2010.

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**APPELLANTS' BRIEF ON APPEAL**

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**I. Statement of Real Party in Interest**

The inventors listed above have assigned their rights in the invention and the present application to Ford Global Technologies, LLC.

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**II. Related Appeals and Interferences**

Previous Appeal Briefs were filed 10/19/07 and 10/1/08. A Notice of Appeal was filed 9/1/09.

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**III. Status of Claims**

Claim 1, 15-26 were cancelled in an Amendment filed on 7/18/05. Claims 28 and 31 were cancelled in an Amendment filed on 3/17/09. Claims 2-14 and 33-35 were withdrawn in a Non-Final Rejection mailed on 6/21/06. Claims 27, 29, 30 and 32 stand rejected under 35 U.S.C 103(a). Claim 36 stands rejected under 35 U.S.C. 102(b). The rejection of Claims 27, 29, 30, and 32 is being appealed.

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**IV. Status of Amendments**

A Response to a Non-Final Office Action with proposed amendments to claims 27 and 36 was filed on March 17, 2009.

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**V. Summary of Claimed Subject Matter**

Claim 27 is the sole independent Claim on appeal. Claim 27 is best understood with reference to Figures 2-3 and 11-15, and with reference to the following citations to Appellants' Specification:

27. A vehicle, 10 (¶38, ln. 1), having a shift lever, 62(¶67, ln. 1-3), with a reverse position generating a reverse position signal (¶114, ln. 6-10); and a controller, 26 (¶67, ln. 1) coupled to shift lever 62, with controller 26 applying brake-steer in response to the reverse position signal (¶115, ln. 3-7), with vehicle 10 further having a transfer case, 156 (¶82, ln. 2-4) having a transfer case mode (¶82, ln. 6-10), with controller 26 changing the transfer case mode based on brake-steer (¶82, ln. 7-9; ¶99, ln. 15-17).

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**VI. Grounds of Rejection to be Reviewed on Appeal**

The rejection of Claims 27, 29, 30 and 32 under 35 U.S.C 103(a) as being unpatentable over Takagi et al. (US 6,324,458 B1) and in view of Suzuki et al. (US 4609064).

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## **VII. Argument**

**The rejection of Claims 27, 29, 30 and 32 under 35 U.S.C 103(a) as being unpatentable over Takagi et al. (US 6,324,458 B1) and in view of Suzuki et al. (US 4609064).**

The Examiner correctly states that Takaga teaches a control system applying brake steer in response to reverse operation. The Examiner admits that Takagi does not disclose either a transfer case or a control changing the transfer case mode based upon brake steer. The Examiner cites Suzuki for its teaching of a 2WD-4WD changeover system which is responsive to steering angle. Finally, the Examiner states that it would have been obvious to modify Takagi to include 4WD to 2WD changeover “when a steering angle equal or larger than a predetermined angle as taught in Suzuki in order to improve the stability when the vehicle is traveling rearward along a curve”. (Page 5, Detailed Action mailed July 9, 2009)

Controlling transfer case mode as a function of steering angle is not what is claimed in Claim 27 and is not even conceptually close to a transfer case mode change in response to brake steer.

Appellants respectfully submit that the Examiner’s rejection based upon Takagi and Suzuki is not sustainable because steering angle is not equatable with reverse operation or operation with brake steering. For example, a motorist may back up a vehicle in a straight line, and brake steer may be employed

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independently of steering angle. The Examiner's proffered system would thus not trigger a transfer case mode change if the vehicle were reversed in a straight line, with or without brake steer. The mere fact that Suzuki teaches a 4WD to 2WD mode change as a function of steering angle does not render a transfer case mode change in response to brake steering, while operating in reverse, obvious in view of Takagi and Suzuki. As a result, Claim 27, as well as Claims 29, 30, and 32, are all allowable over the Examiner's rejection.

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**VIII. Conclusion**

For the foregoing reasons, Appellants respectfully request that the Board direct the Examiner in charge of this examination to withdraw the rejections and to issue Claims 27, 29, 30, and 32 in this case.

Please charge any fees required in the filing of this appeal to Deposit Account 06-1510.

Respectfully submitted,

Date: 2/2/10

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## **IX. Claims Appendix**

27. A vehicle comprising:

a shift lever having a reverse position generating a reverse position signal; and

a controller coupled to the shift lever, said controller applying brake-steer in response to the reverse position signal, with said vehicle further comprising a transfer case having a transfer case mode, said controller changing the transfer case mode based on brake-steer.

29. A vehicle as recited in claim 27 wherein said controller is programmed to apply brake-steer by applying a first brake and a second brake to reduce the turning radius of the vehicle.

30. A vehicle as recited in claim 27 wherein said controller is programmed to apply brake-steer by applying at least one brake at a first wheel to reduce a vehicle turning radius.

32. A vehicle as recited in claim 27 further comprising a steering wheel angle sensor generating a steering wheel angle signal, said controller programmed to apply brake-steer in response to the reverse directional signal and the steering wheel angle signal.

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**X. Evidence Appendix**

None.

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**XI. Related Proceedings Appendix**

None. Neither the Board, nor any court, has rendered any decision in this case.